Fuel Treatment Effectiveness

Several wildfires have put fuel reduction treatments to the test on lands managed by the Bureau of Land Management (BLM) Medford District. Through Fuel Treatment Effectiveness Monitoring (FTEM) (2008-2023), we have been able to observe and monitor the contribution these treatments have toward moderating fire behavior and effects, and aiding in wildfire control.


Taylor Creek Fire (2018)— Photo by C. Volpe

Fuel Treatment Objectives:

- ***Reduce*** fuel loading, and negative post-fire effects, such as widespread canopy mortality
- ***Provide*** strategic locations for fire personnel to safely engage wildfires and limit large fire growth
- ***Improve*** overall forest health and promote long-term fire resilience
- ***Modify*** fuels, so that forests and woodlands can be easily maintained with periodic prescribed fire

Field Observations — fuel reduction treatments met by wildfires

- Firefighters were able to safely use direct attack methods, due to:
  slowed rates of fire spread, and reduced fire intensity and flame lengths (<4 ft);
  strategic treatment locations provided safe anchor points for burnouts along roads;
  thinned tree canopies increased ability for retardant and water to reach forest floor;
  and less vegetation (fuel) increased fireline production rates in treated areas.
- In treated areas, fire stayed mostly on the ground (surface fire), which reduced soil and tree damage and resulted in less tree mortality compared to untreated areas.
- Fewer spot fires occurred in treated areas and those that started were easily contained.
- Post-fire effects in treated areas were comparable to results after prescribed (controlled) fires applied to reduced surface fuels, ladder fuels, and vegetation density.
- Treatments were effective for up to 15 years.

Above — Surface fuel reduction treatment (mechanical mastication) completed in 2003. The treated area also burned in Worthington Road wildfire (2013) and the entire photo area above burned in the South Obenchain wildfire (2020). Photo by J. Volpe

These field observations are consistent with a growing body of evidence indicating that well designed and maintained fuel treatments can have very positive influence on wildfire effects and fire management capabilities.

BLM Medford — Southwest Oregon — FTEM 2008 — 2023

March 2024

Southwest Oregon | BLM Medford

Fuel Treatment Effectiveness — 2008-2023

Fuel Treatment Effectiveness Monitoring (FTEM):

FTEM is an interagency web-based hub for documenting on-the-ground effects of hazardous fuels reduction treatments on the wildland fire environment, framed around two key questions :

- *Did the fire behavior modify as a result of the treatment?*
- *Did the treatment contribute to control of the fire?*

Assessing Effectiveness :

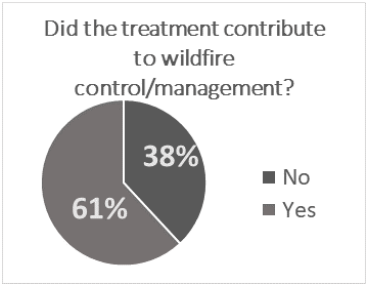
FTEM field assessments are conducted in all fuels treatments intersected by wildfires, or those which aid in wildfire control, within 3 months of the wildfire burning through the treatment.

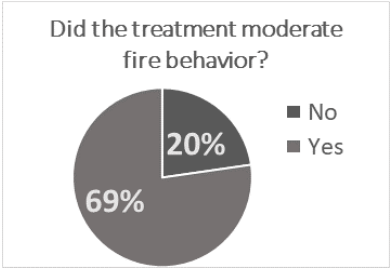
First-hand accounts from firefighters, burn severity maps, and field measurements all inform these assessments.

Above — Example of a surface and ladder fuel reduction treatment (thin and handpile burn 2014) used for direct attack operations. The strategic location, low fuel loading, and reduced fire behavior provided a safe and effective place for firefighters to construct handline. Spencer Fire (2018). Photo by Y. Gallimore

Above — Areas previously treated to reduce surface and ladder fuels (thin and handpile burn 2007) in the Pleasant Creek Fire (2018), resulted in low-intensity surface fire and similar outcomes from application of maintenance prescribed fire, maintaining low-load surface fuels and creating diversity. Photo by J. Volpe

2008 - 2023 BLM Medford FTEM Statistics





- No. of fuel treatments intersected by wildfire = **293**
- Approx. total fuel treatment acreage intersected = **8,908**
- No. of wildfires intersecting treatments = **82**
- No. of wildfires starting in & contained in a treatment = **40**
- Years without a wildfire/fuel treatment intersection = **2**